HELPING UKRAINIAN FOOD INDUSTRY SMES ADJUST TO AND BENEFIT FROM SPS STANDARDS AND HACCP TO INCREASE EXPORTS

A STRATEGY AND ACTION PLAN

August 2007

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1. Introduction

This strategy and action plan has been developed as part of the USAID-funded TIBA Project and is targeted toward small and medium-sized enterprises (SMEs) in the Ukrainian food industry. SMEs comprise a significant share of the Ukrainian economy, including in the food sector. However, under conditions of increased competitiveness and an urgent need to diversify export markets, SMEs are the category of enterprises that faces the most significant difficulties.

2. Goal and objectives

Goal:
To facilitate better compliance of the agricultural and food industry of Ukraine with SPS requirements.

Objectives:
- Build the capacity of local food industry associations in the area of food safety; and
- Assist SMEs in developing and implementing food safety management systems based on HACCP principles to increase exports.

3. General overview of the Ukrainian food industry

The food industry includes thousands of large, medium-sized, and small enterprises with various forms of ownership that pay 7 billion UAH of taxes into budgets at different levels of governance annually. The food industry has held one of the leading places in the structure of the Ukrainian economy for years. The food sector produces almost 15 percent of all industrial output in Ukraine. The most popular products sold include beverages of all types, meat and dairy products, tobacco products, bread and pastry goods, and oils and fats.

Since 2001, the volume of domestically produced food has grown by more than two times. Over the past several years, the food industry has been one of the most dynamic and fast-growing sectors of the Ukrainian economy and continues to be a center of potential growth.

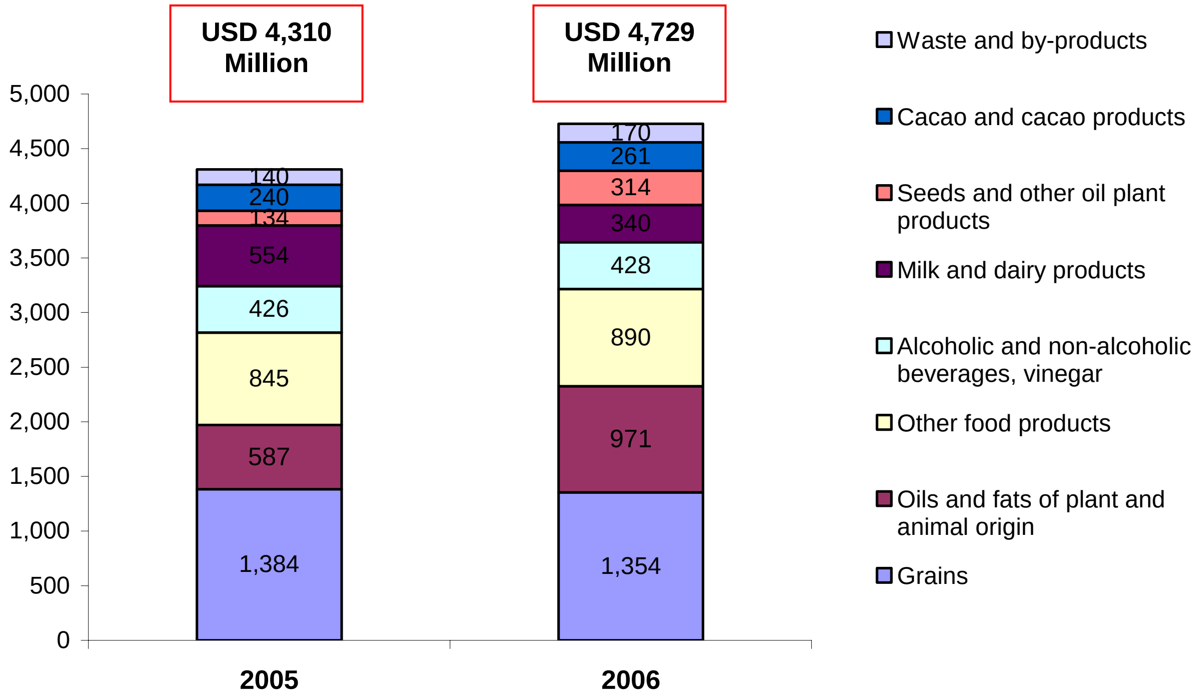
In January-November 2005, food production was valued (in terms of selling prices) at 49.8 billion UAH, which comprised 14.3 percent of total industrial production in Ukraine; in January-November 2006, it reached 56.1 billion UAH, or 13.6 percent of total industrial production in Ukraine.

Food production growth in 2006 (comparing 2005) totaled 10 percent (in comparative prices).

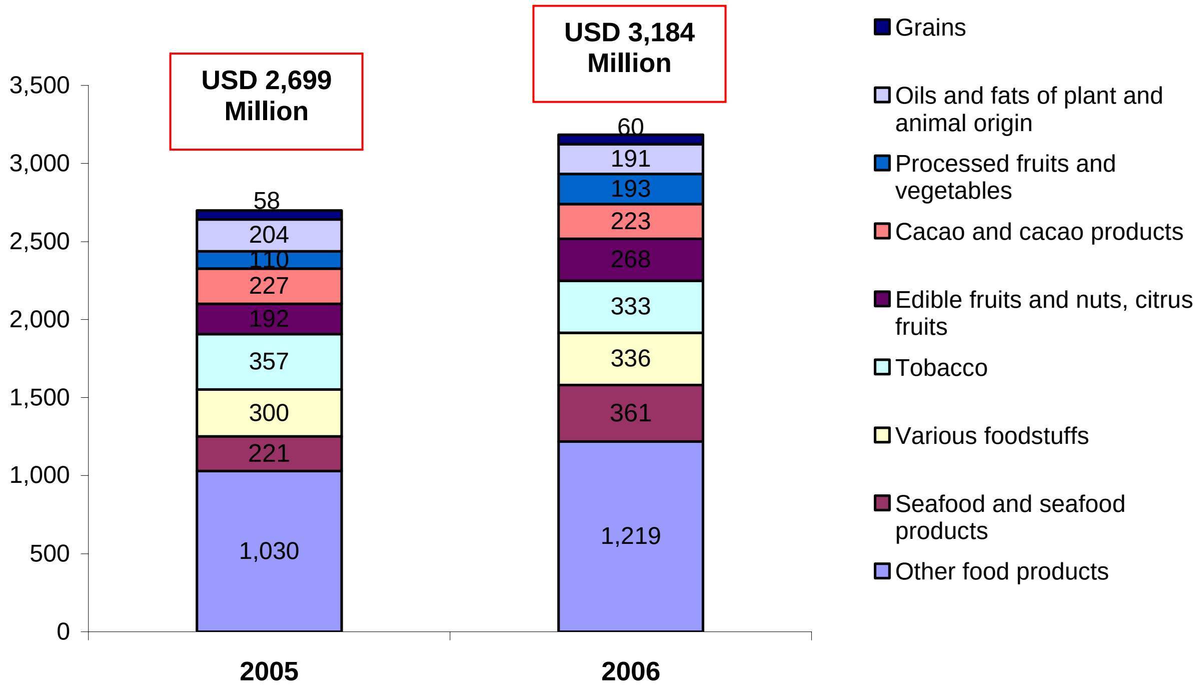
3.1 Food exports and imports

Foreign trade turnover of agricultural and food products during 11 months of 2006 comprised USD 7,664.1 million (16 percent more than during the same period in 2005), or 10.5 percent of overall foreign trade turnover in Ukraine.

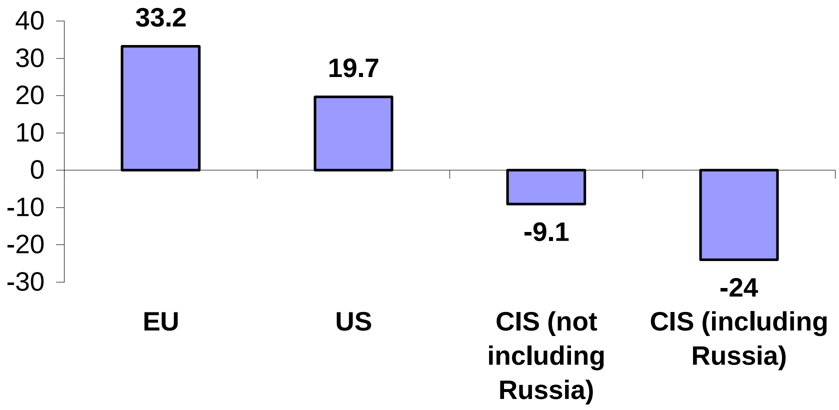
Export structure of agricultural and food products, 2005 vs 2006 (million USD)



Import structure of agricultural and food products, 2005 vs 2006 (million USD)



Increase (decrease) of foreign trade turnover (11 months of 2006), in %



It should be noted that starting from January 1, 2006 when the new set of EU requirements for food and animal feed business operators (including those in third countries) came into force (the EU New Package of Hygiene Requirements), imports of Ukrainian food to the EU were halted completely until both facilities and the state system of food safety control could be brought into compliance with the new regulations. Only in November 2006 was Ukraine included in the list of third countries and territories from which imports of fishery products, dairy products, and eggs were permitted. However, that did not mean that imports were renewed automatically. Several enterprises are currently completing further procedures to receive permission to export.

3.2 Foreign investment

Increased consumer expenditures and domestic consumption as well as increased volumes of food exports present a strong incentive for food processors. The food industry and processing of agricultural products is one of the most attractive areas for foreign (including European) investors. As of October 1, 2006, the amount of foreign direct investment in the agro-industrial complex of Ukraine starting from 1992 was USD 1.76 billion, or 8.1 percent of the overall amount of direct foreign investment in the Ukrainian economy; USD 1.3 billion of this was directed into the food industry. Investors from the UK invested over USD 117.5 million in Ukrainian food enterprises, while the Netherlands invested USD 345.7 million. Other major investors included the US, Cyprus, Switzerland, Sweden, Germany, Denmark, Russian Federation, and France.

In the first quarter of 2007, foreign direct investment in the Ukrainian food industry totaled USD 102.6 million, in third place following the financial sector and construction. Still, additional investment would benefit the food industry.

4. Leading food production sectors

The food industry includes sectors such as sugar, salt, baked goods, confections, dairy products, oils and fats, non-alcoholic beverages, tobacco, alcohol, meat and poultry, seafood, fruit and vegetable processing, etc. (over 20 in total). Each of these product types has its own specifics.

4.1 Production volume by type of goods

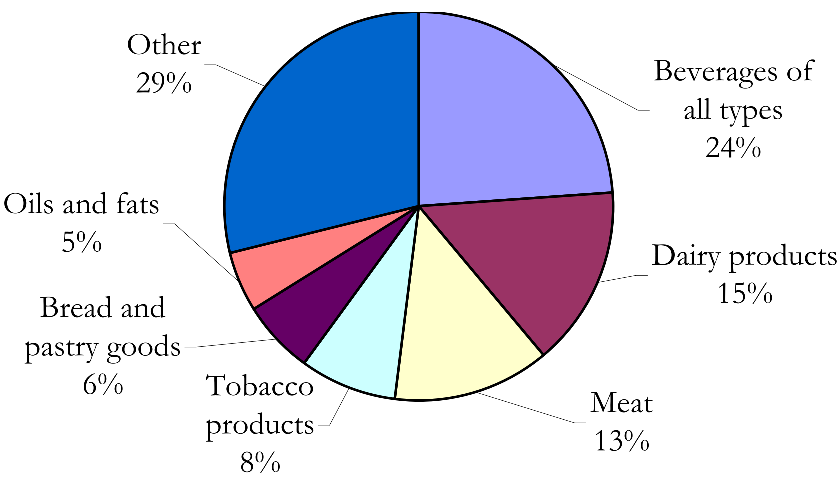
Production volume by type of goods, 2005 vs 2006 (thousand tons)

Product type	2005 (11 months)	2006 (11 months)	Dynamics (in %)
Oils, non-refined	1,395.9	1,972.5	141.3
Oils, refined	444.2	468.2	105.4
Mayonnaise, emulsified sauces	166.4	170.0	102.8
Margarine and similar products*	301.1	300.1	99.7
Poultry meat and giblets, frozen	55.9	91.2	163.2
Pork, fresh (fresh-killed) or chilled	68.4	105.0	153.5
Canned meat	733.0	1,029.0	140.4
Frozen pork	17.7	23.1	130.8
Beef and veal, frozen	47.2	32.4	68.6
Ready-to-eat and canned beef and veal products	17,758.0	12,687.0	71.4
Ready-to-eat and canned pork products	4,635.0	4,515.0	97.4
Ready-to-eat liver products	8,176.0	6,891.0	84.3
Butter with fat content up to 85%	117.6	101.8	86.6
Cream	20.6	13.0	63.2
Milk and cream powders	112.7	105.8	93.9
Cheeses	272.4	215.2	79.0

* *Note: Industries that suffered decreases in production volume are highlighted in red.*

In the structure of food sold, the top positions in 2006 were occupied by beverages of all types (24 percent), dairy products (15 percent), meat products (13 percent), and bread and pastry goods (6 percent).

Structure of food product sales, 2006



4.2 Competition

The competitive environment in the Ukrainian food industry is rather heterogeneous. Of 1,500 meat-processing enterprises, the 10 largest produced around 40 percent of total volumes in 2005. Of over 3,000 bakery and flour-grinding facilities, the 20 largest companies controlled approximately 40 percent of the market. Meanwhile, out of over 100 producers of non-alcoholic drinks, the 10 largest controlled 60 percent of the market. In the cheese industry (which consumes half of the raw milk produced in the country), the 10 largest producers accounted for approximately 50 percent of total cheese production volume. It is predicted that large-scale consolidations will take place in most of the food sectors over the next few years.

Within the segments of sunflower oil, confectionary products, beer, milk and ice cream, tobacco, and liquor and alcoholic drinks, competition is stronger. Of approximately 2,000 producers of non-refined sunflower oil, the market share of the 10 largest companies is 70 percent. Within the subcategory of non-refined sunflower oil (which includes 70 producers), the share of the 10 largest companies totals 88 percent of total production volume. Of 120 domestic confectionary companies, the 10 largest control over 70 percent of the market, while 90 percent of the local beer market is controlled by the 10 largest companies, of which three giants (Obolon, Sun Interbrew Ukraine, and Baltic Beverages Holding Ukraine) account for 63 percent of total production volume. Of 100 domestic ice cream producers, the 10 largest control over 70 percent of the market, while the "Big Four" (Lasunka, Zhytomyrsky Milk Plant, Herkules, and Troyanda) produce 41 percent of total production volume. Of 300 milk-processing companies, the 10 largest control 68 percent of the market. Of more than 70 domestic producers of liquor and alcoholic beverages, the 10 largest account for approximately 70 percent of total production volume.

4.3 Industry associations

A significant share of food processors in Ukraine are members of industry associations (the list below is not exhaustive):

- Association of Ukrainian Producers of Ice Cream and Frozen Products
- UkrKonservMoloko National Association
- UkrTsukor National Association of Sugar Producers of Ukraine
- Union of Juice Producers of Ukraine
- Union of Poultry Farmers of Ukraine
- UkrPtakhoprom Industrial Research Association
- UkrOliyaProm Association
- Ukrainian Bakers' Association (UBA)
- UkrMyaso National Association of Meat Product Manufacturers of Ukraine
- UkrKhlibProm Association of Baked Goods Manufacturing Enterprises
- Union of Dairy Enterprises of Ukraine
- Ukrainian Agrarian Confederation (UAK)
- Ukrainian Grain Association (UZA)
- UkrVinProm Corporation
- Union of Alcohol and Tobacco Wholesalers and Producers (SOVAT)
- UkrPyvo Industrial Company for Manufacturing Beer, Non-Alcoholic Beverages, and Mineral Water CJSC
- UkrKonditer CJSC (uniting 28 factories, manufacturing plants, workshops, and catering enterprises)
- Ukrainian Association of Producers, Distributors, and Developers of Biologically Active Food Supplements

5. Key food safety issues

5.1 General food industry issues that impact food safety

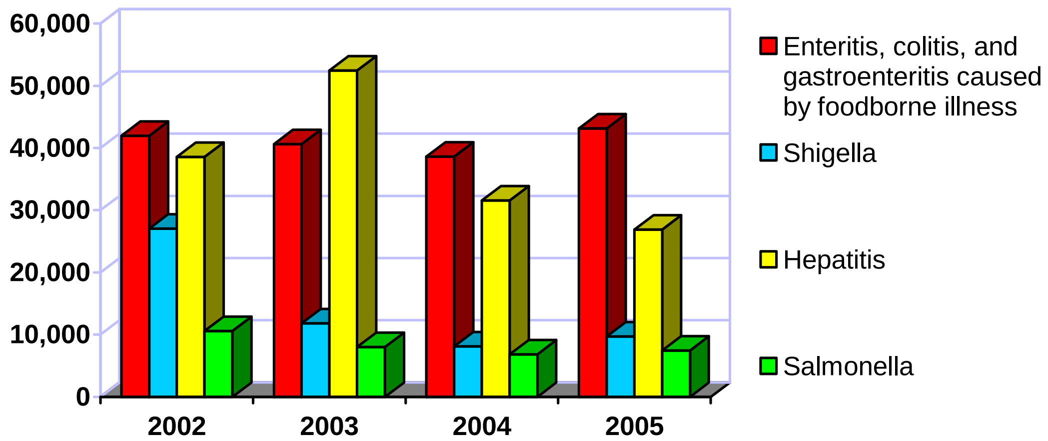
The issues listed below present general characteristics of Ukraine's food industry that also have a significant impact on food safety:

- Loss of traditional markets and the need for diversification. In January 2006, Russia banned imports of several categories of food from Ukraine (meat/meat products; milk/dairy products) that had been traditionally exported by Ukraine to Russia in large quantities, citing inappropriate documentation and low food safety standards;
- A need for additional investment for introducing new technologies, speeding up reforms in the agricultural sector, and increasing competitiveness of local food products in the global food market;
- Occupation of a large market share by large companies, which complicates successful development of food industry SMEs;
- The absence of a sufficient number of large-scale milk and meat producers that can consistently supply sufficient amounts of high-quality raw materials to processors;
- Insufficient application of risk analysis concepts in formulation of policies and drafting new regulations, etc., by government authorities;
- Poor organization of activities by the government in terms of facilitating introduction of a food safety management system at food production facilities; and
- Responsible government authorities (e.g., the State Department of Veterinary Medicine of Ukraine) have not yet developed respective recommendations and guides.

Other factors that have negative effects on food sector enterprises include low procurement prices on animal raw materials, a deficit of current assets among producers, fluctuations of consumer demand, and high rates of import duties. In general, further development of the industry depends on consumers' income levels and the country's export capacity.

5.2 Foodborne illness

Another food safety issue is the number of cases of foodborne illness; at present, this does not appear to be on the decrease.



As of June 6, 2007, the Ministry of Health reported about 13 outbreaks of foodborne illness from the beginning of this year; 192 people became ill, including 100 children. In 2006, 35 outbreaks of foodborne illness were registered; 740 persons were affected, including 390 children. Most of the outbreaks happen after mass celebrations – weddings, graduation parties, anniversary and birthday celebrations, etc. In addition, there have been reports of outbreaks in schools and food service outlets. According to epidemiologists, major sources of contagions are prepared foods, milk and dairy products, and confections prepared in large quantities, leading to accumulation of causative agents of infections.

6. The status of HACCP implementation among food industry SMEs

6.1 National regulatory framework

According to the Law of Ukraine "On Amending the Law of Ukraine 'On the Quality and Safety of Food and Raw Materials,'" people who are involved in production or introduction of food products into circulation shall apply sanitary measures and good manufacturing practices, HACCP systems, and/or other systems of safety and quality assurance upon production and distribution of food (Article 20, Responsibilities of Producers and Sellers [Suppliers], Par. 6[2]). Since 2003, the National Standard of Ukraine DSTU 4161-2003 "Food Safety Management Systems: Requirements" has been in use. In accordance with WTO requirements, this standard is voluntary. In the near future, it will be substituted by a national standard based on ISO 22000:2005.

6.2 Implementation of food safety management systems at food processing facilities

The HACCP system is being implemented at approximately 100 food processing facilities in Ukraine (exact data is unavailable because there is no single register in the country), the majority of which are large companies with foreign investment that started to develop food safety management because of internal corporate standards (Coca-Cola Beverages Ukraine Ltd.), or to satisfy requirements of major customers (Halakton JSC did so in order to receive a contract for supplying ice cream to the McDonald's fast food restaurant chain in Ukraine). For others, incentives to implement HACCP include expanding into new markets and using HACCP as a marketing advantage, achieving/maintaining leading positions in the domestic market, obtaining loans, concerns about consumer health, etc.

The main sectors where HACCP is implemented include meat processing, dairy, fish processing, non-alcoholic/low-alcohol beverages, and confections. Not all enterprises that have implemented HACCP have had it certified. The reasons for this are mainly high certification requirements and certification costs. The standards used to certify HACCP systems include the aforementioned DSTU and IFS (International Food Standard), BRC (British Retail Consortium Global Standard – Food), and ISO 22000:2005 international standards.

7. Main constraints on increasing food safety among SMEs

SMEs face a number of constraints/issues that make it difficult for them to implement HACCP:

1. Inadequate condition of fixed assets and an inability to satisfy prerequisite program requirements
    - Aging buildings and equipment;
    - Designs of production and employee facilities and territories do not meet Good Manufacturing Practices (GMP) standards;
    - Outdated utility networks do not allow for establishing appropriate sanitary conditions;
    - Internal construction materials and surfaces do not meet GMP requirements;
    - Utensils are made of materials not recommended for application at food facilities;
    - Production areas are too small to accommodate growing production volumes;
    - In some cases (especially at meat processing facilities), the variety of food produced on the same processing lines is too broad; and
    - Some services (e.g., pest control) are not available from independent companies on a commercial basis.

2. Raw materials/ingredients and traceability

- Many facilities (especially the dairy and meat processing industries) have a significant problem with the low quality of incoming raw materials or uncertainty regarding the origin thereof, which affects production of final products and hampers distribution to international markets; and
- Facilities are often unable to trace raw materials and ingredients (and final products in some cases) back to their source.

3. Lack of competency

- There are no consistent sources of high-quality information on food safety and management systems;
- Insufficient qualification of food facility personnel (in the area of food safety management) and failure to apply the concept of ongoing and training; and
- A lack of qualified consulting services for development and implementation of food safety management systems.

4. Relatively high costs of food safety management implementation and certification

5. The “human factor”

- Poor personal hygiene habits and a lack of sanitation culture, especially among facilities located in rural areas.

8. Key conclusions

1. The Ukrainian food industry is developing quickly; production of foodstuffs is profitable and has a promising future.
2. The food industry requires additional foreign investment.
3. The current trend of the largest processors controlling large market shares makes it difficult for SMEs to compete successfully.
4. The most developed industry sectors are beverages of all types, milk and dairy products, meat products, and bread and pastry products.
5. Since early 2006, Ukraine has faced significant difficulties with exporting its meat and milk/dairy products to Russia (prior to 2006, Russia was the main export market), a fact that demonstrates an obvious need to diversify export markets.
6. Of all food types, only fish and fish products, milk and dairy products, and eggs are currently allowed into the EU.
7. Within most food sectors, producer associations and unions have been established and are operating successfully.
8. Since late 2005, implementation of HACCP at all food production facilities has clearly been made a legally stipulated requirement.
9. There is an obvious lack of information (especially in the form of recommendations and manuals aimed at specific sectors) regarding HACCP implementation by food processors.
10. Small and medium-sized food enterprises face significant difficulties in the process of HACCP implementation.

9. Proposed solutions

Given the specifics of individual food sectors, the most rational solution would be for industry associations to take a leading role in providing informational support regarding HACCP implementation for SMEs. Their functions and services in this area could include the following:

- Organizing development of and updating sector-specific recommendations and guides/manuals on HACCP introduction, and dissemination thereof among association members;
- Arranging seminars on application of manuals and training courses on food safety management systems (in-house and with invited experts); and
- Providing regular information on food safety and management systems thereof, and explaining national and international regulations and requirements.

Expansion of the list of regular services provided by associations with the aforementioned functions could be beneficial to both processors and the associations themselves. Processors will get a channel of systematic and up-to-date informational support in order to be aware of recent SPS developments, better compliance with national regulations, and ways to meet export requirements. Associations will be able to attract new members, satisfy expectations of current members more effectively, and generally enhance sustainability through increased numbers of initial and regular membership fees.

In order to enable associations to perform new functions and provide qualified services to their members, the TIBA Project can offer a set of capacity-building activities (see the action plan below).

Since there is an obvious need for a consolidated set of HACCP recommendations that takes the specifics of Ukrainian SMEs into account, manuals specific to three food sectors will be developed based on best practices identified through sector surveys. To demonstrate the viability and economic and social benefits of food safety for SMEs, targeted plant-level assistance will be provided to five SMEs. There is a proposal to select pilot facilities from three sectors of those listed below: seafood processing, baked goods and confections, milk and dairy products, meat and poultry processing, beverages of all types, and fruit and vegetable processing. The food services sector may also be considered.

To make the best choice, the following selection criteria should be used:

- Need for HACCP based on sector-specific hazards (some food products are associated with food safety problems that are more dangerous for health/occur more frequently than with other food products);
- General level of industry development (total output, share in the agricultural and food industry, growth potential, consumer demand, etc.);
- General preparedness of the sector for HACCP implementation (earlier food safety efforts and results thereof, increased levels of compliance with new regulatory requirements, investments made in infrastructure, etc.);
- Potential benefits of HACCP implementation for consumers (improvement of the current situation with foodborne illnesses, etc.);
- Ability to demonstrate economic benefits of HACCP implementation (potential increased investment, expansion at the local level, new jobs, etc.); and
- Export capacity (availability of export markets under condition of HACCP implementation/export limitations due to other reasons, i.e., politics).

Criterion / Sector	Hazard-based need for HACCP	Level of sector deve-lopment	Sector readiness for HACCP	Benefits for consumers	Potential economic benefits	Export capacity	Points
Seafood processing	High (5)	Average (3)	Average (3)	High (5)	High (5)	High (5)	**26**
Baked goods and confections	Low (1)	High (5)	Average (3)	Low (1)	Average (3)	Average (3)	**16**
Milk and dairy products	High (5)	High (5)	Average (3)	High (5)	High (5)	High (5)	**28**
Meat and poultry processing	Average (3)	High (5)	Average (3)	High (5)	Average (3)	Low (1)	**20**
Beverages (all types)	Low (1)	High (5)	Average (3)	Low (1)	Low (1)	Average (3)	**14**
Fruit and vegetable processing	High (5)	High (5)	Average (3)	Average (3)	High (5)	High (5)	**26**
Food services	High (5)	Average (3)	Low (1)	High (5)	Average (3)	Low (1)	**18**

Note: High = 5 points; Average = 3 points; Low = 1 point.

Based on the figures above, **seafood processing, milk and dairy products, and fruit and vegetable processing** (the "Top Three") are the most suitable sectors for developing and validating HACCP manuals and testing HACCP models at production facilities. It should be noted that due to production geography factors, the latter two sectors' facilities are dispersed all over Ukraine, while the first sector's facilities (seafood processing, especially saltwater fish processing) are concentrated on the coasts of the Black and Azov Seas to a large extent.

Within the three aforementioned industry sectors, **five facilities** will be selected for plant-level assistance in developing and implementing HACCP food safety management systems. The following general selection criteria will be used (a more detailed set of criteria will be developed in order to make the selection process transparent and ensure that the selected SMEs suit the project's goals):

1. Selected facilities should not operate on a seasonal or sporadic basis.
2. Eligible facilities may belong to small and medium-sized enterprises, but shall not consist of home or cottage industry production.
3. There should be reasonable grounds for considering exports of the company's products to be feasible.
4. Company management must realize that the project team may decide to focus on one department or production line and not evaluate the entire facility.
5. A history of investment in improvement of their own plants' layouts/equipment/sanitation practices and/or experience participating in technical assistance projects targeted at better sanitation and food safety will be an asset.
6. It is imperative that the facility's top management participate in this process and fully agree to support it, including financial support if appropriate.
7. Enterprises must devote adequate time, resources, and personnel to this process and provide visiting specialists with adequate assistance and support throughout this period.
8. Company must be willing to share "success stories" with Technical Training and Assistance

(TTA) specialists with the understanding that appropriate components of the "success stories" will be shared with national industry leaders to demonstrate the potential impact of the this process.

The following overall approach to ensuring sustainability is proposed: the TIBA Project will provide technical assistance to the three selected sectors by developing the capacity of sector associations and implementing the proposed solutions at five selected facilities; after acquiring new information and skills, associations will be able to provide these types of services to enterprises themselves or with help from external experts if needed, and receive additional financial support for these activities from new and old members.

In addition, this activity will be supported by two other initiatives: 1) establishment of a favorable regulatory environment for introduction of food safety management among SMEs and capacity-building assistance to the Government of Ukraine, and 2) an increase in accessibility of internationally recognized certification (see the separate Action Plan *Facilitating Establishment of a Favorable Regulatory Environment for HACCP Implementation by SMEs* for details).

10. Action plan

1. **Build capacity of sector associations to provide food safety assistance to their members** - Sector-specific manuals will be developed for specific facilities, and associations selected will be from the same sectors as production-level assistance participants in order to build and demonstrate a model of sustainable and self-supporting assistance.

   1.1 Provide seminars on general aspects of food safety to association staff - Seminars will include such topics as the benefits of food safety, general food safety requirements of export markets, measures for implementing a food safety management system, etc.

   1.2 Prepare future trainers among association staff - Candidates will be selected from successful participants of the general seminars (above). Trainers will be able to assist association members with adoption of international standards and HACCP (using sector-specific manuals).

   1.3 Assist associations in establishing a system of regular provision of food safety information to SMEs - This will be done by helping associations launch "Question and Answer" bulletins to be disseminated among members via association Web sites.

2. **Assist SMEs in adopting international food safety standards to participate in supply chains** - Within the three food sectors (seafood processing, milk and dairy products, and fruit and vegetable processing), five SMEs will be selected based on a set of specific criteria. These SMEs will receive consulting assistance on HACCP development and implementation and will be offered HACCP certification options. However, there will be no guarantees of funding or successful certification.

   2.1 Benchmark food safety management models applied in other countries and results thereof - The most widely used current HACCP models will be analyzed for differences (US, EU, etc.) and best practices will be identified for Ukraine. These best practices will be used as the basis for sector-specific manuals.

   2.2 Develop and disseminate SME sector-specific manuals on HACCP implementation for seafood processing, milk and dairy products, and fruit and vegetable processing - The manuals will be developed by a project team and reviewed by relevant association representatives (and other interested parties as deemed necessary). A sample outline is annexed below (dairy sector manual); the two other manuals will have a similar structure. The manuals will be used for production-level assistance and amended if necessary based on reviewers' comments and application results. The manuals will be disseminated through training sessions arranged by sector associations and association Web sites (if associations wish to do so).

   2.3 Conduct trainings on the need for and benefits of international compliance with food hygiene and food safety requirements for food industry SME representatives - The training sessions will not be limited only to the selected sectors, but will be open to all processors and will include topics such as sources of food hygiene and safety requirements, major provisions of food safety management systems, the most widely used international standards (including the ISO 22000 family), typical HACCP implementation problems, overviews of export market requirements, new trends in food safety, bio-security issues, etc. The training materials will be designed in such a way to make them interesting and useful for both beginners and advanced participants.

2.4 **Provide SMEs with facility-specific guidance on adoption of HACCP systems to meet international food safety trade requirements and participate in supply chains** - HACCP food safety management systems will be implemented at a total of five selected SMEs. Applying the principles of proper food safety practices will be shown to positively influence business profits, expand markets, and establish a reputation for providing safe products to consumers. This assistance will be based on a sector-specific manual.

2.4.1 **Conduct diagnostic audits** - The team will collect baseline data on the enterprise's current sanitation, hygiene, and food safety status to better focus further interventions and for use as a benchmark for future evaluation of success.

2.4.2 **Give training on prerequisite programs and HACCP principles** - Top-down training will be delivered to facility personnel. Personnel will be divided into three major groups based on level of responsibility and job functions in relation to food safety: general awareness groups, top management, and future HACCP teams. Each group will receive training relevant to its role. In addition, a team of internal trainers will be taught in order to ensure continuous training after the completion of project assistance.

2.4.3 **Develop and implement HACCP documentation** - Assistance will be provided to the plant HACCP team in development, day-to-day application, and updates of documentation specific to the production facility (production food safety manuals, procedures, instructions, records, etc.). This activity will be implemented through face-to-face consultations and visits and via electronic communication.

2.4.4 **Offer certification options and help with preparation for certification audits** - A number of certification options (through internationally recognized certification authorities) will be offered to each enterprise based on the target market, commodity/processing specifics, etc. Certification audit requirements will be explained, and the project team will conduct a "pre-certification" audit to identify weak points that will need timely improvement.

2.5 **Develop food safety awareness among university students and potential future SME personnel** - A short food safety course will be included in the curriculum of an interested university. The course will cover food safety basics, HACCP, the regulatory framework, and practical sessions. Successful students will receive certificates.

2.6 **Prepare consolidated food safety information packages to be disseminated among SMEs** - These will include leaflets/brochures on specific topics of particular interest to food processors and farmers/raw material suppliers (specific topics for leaflets/brochures will be determined later based on results obtained). At least four leaflets/brochures will be developed and disseminated through Web sites, associations, and in cooperation with other USAID programs (e.g., Farmer-to-Farmer/CNFA).

3. **Identify constraints and devise solutions to adjust to Codex Alimentarius standards and HACCP** - Prepare a review of typical problems faced by SMEs trying to meet international food safety requirements/recommendations (based on the regulatory framework, technology, sanitary conditions, hazard control methods, personal hygiene and behavior, general perceptions, etc.) and provide recommendations.

Annex I

SAMPLE OUTLINE OF SECTOR-SPECIFIC MANUALS

Manual on HACCP Implementation for SMEs in the Milk and Dairy Products Sector

Proposed Table of Contents*

Introduction

Overview of the national and international regulatory framework

Overview of good manufacturing practices. Sanitation and standard operating procedures
- o Personnel;
- o Buildings/facilities;
- o Equipment; and
- o Production and processing controls.

Milk and dairy hazards and controls. Hazard analysis and risk assessment

Main steps for HACCP system development and implementation

Documentation requirements. Control of documents and records

Food safety management system verification. Internal audits under the HACCP system

Major HACCP implementation problems

Annexes:
- o Annex 1. Terms and definitions
- o Annex 2. Model HACCP Plan
- o Annex 3. List of HACCP documents
- o Annex 4. Sample HACCP documents and records
- o Annex 5. List of regulations relevant to the Ukrainian milk and dairy products sector
- o Annex 6. EU and US import procedures for milk and dairy products

* *Note: Manuals for the seafood processing and fruit and vegetable processing sectors will have similar outlines.*